

#### PCS & PMA proposal

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IEEE 802.3dh Task Force - 8th January 2023 Interim Meeting

## PCS and PMA proposal



- perezaranda\_3dh\_02a\_2209\_pcspma.pdf gave a comprehensive tutorial about why 802.3cz did not reuse BASE-SR and explained the distinctive features of BASE-U PCS & PMA
- BASE-U PCS & PMA design obeys to specific requirements of functionality, performance and environmental conditions of the targeted automotive application
- BASE-U PCS & PMA meets the P802.3dh project's objectives
- BASE-U PCS & PMA is technically complete and mature (P802.3cz is currently in RevCom)
- BASE-U PCS & PMA meet automotive requirements:
  - support all the targeted data-rates
  - support **OAM** channel
  - support EEE

# PCS and PMA proposal



- BASE-U PCS & PMA is designed to approach channel capacity limit. Specially relevant for GI-POF (P802.3dh) that has lower bandwidth and higher attenuation than OM3 (P802.3cz)
- BASE-U PCS & PMA support fully adaptive receiver implementations:
  - Compensate impairments due to large parametric deviation → high production yield
  - Maximize RX sensitivity → support of much higher insertion losses for optical connections targeted to harsh environments
  - Enable the use of automotive qualified and high volume low-cost bulk CMOS submicron tech nodes
- Adoption of BASE-U PCS & PMA in P802.3dh will minimize automotive market fragmentation, e.g. same PHYs can be used for OM3 and GI-POF
- Link budget analysis for 10 and 25 Gb/s for OM3 and GI-POF channels have were also presented considering BASE-U PCS/PMA: channel insertion losses and link budget are similar in P802.3cz and P802.3dh

## Straw-poll

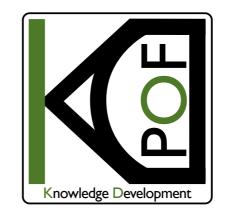


- Straw-poll: "To adopt the P802.3cz BASE-U PCS and PMA sublayers in P802.dh"
- Answers:
  - Yes, I support adoption
  - No, I do not support adoption
  - I need more time or information

#### Motion



- Motion: "To adopt the P802.3cz BASE-U PCS and PMA sublayers in P802.dh"
  - Mover: Rubén Pérez-Aranda, KDPOF
  - Seconder:
- Y: , N: , A:
- Technical motion, Y / (Y + N)  $\ge$  75%



#### Thank you

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